

Con Serve Broker

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## CLAIMS

1. A method of enabling a client, running on a first computing device that is connected to a second computing device, to use a service on that second computing device, comprises the steps of:
  - (a) a service, installed on the second computing device, registering its published name with a service broker on that second computing device;
  - (b) the client sending a message to the service broker specifying the name of the service;
- 10 wherein the published name of the service conforms to a structured naming convention that uniquely identifies the service as a service from a particular vendor, but without specifying the connection point address of that service, to enable the service broker to start up the service without the risk of a clash.
- 15 2. The method of Claim 1 in which the structured naming convention uses reversed domain information.
3. The method of Claim 1 in which the service broker uses a single well-known port number address so that the client needs only this well known port number to send a message to the service broker.
- 20 4. The method of Claim 1 in which the service obtains a connection point and informs the service broker of the connection point address and the service broker then informs the client of the connection point address.
- 25 5. The method of Claim 4 in which the service broker informs the client of the connection point address and the client then uses that address in communicating directly with the server.
- 30 6. The method of Claim 4 in which the connection point address is a port number.

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7. The method of Claim 4 in which, if a service is required more than once, the server providing the service will not be re-started, but instead the service broker uses cached address information.
- 5 8. The method of Claim 1 in which, when services register with the service broker, they register a version number to indicate the version of the service that they are providing.
9. The method of Claim 8 in which the client can request a specific version of a  
10 named service or it can omit the version, in which case the service broker will start the highest version available of the named service.
10. The method of Claim 1 in which the service broker enables multiple services  
15 installed on a single, second computing device to serve one or more external clients that are PCs or other computers connected by a local link such as cable, Infra-Red or short distance radio (such as Bluetooth) or by a remote link such as a network data connection.
11. The method of Claim 1 in which the service broker provides authentication  
20 information such that only authenticated external clients can access services.
12. A computing device that is connected to a first computing device, the computing  
device comprising (a) a server and (b) a service broker to which a service installed on the computing device registers its published name and which receives a message sent from  
the first computing device, the message specifying that published name;  
25 wherein the published name of the service conforms to a structured naming convention that uniquely identifies the service as a service from a particular vendor, but without specifying the connection point address of that service, to enable the service broker to start up the service without the risk of a clash.
- 30 13. The device of Claim 12 in which the service broker is programmed such that the structured naming convention uses reversed domain information.

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14. The device of Claim 12 in which the service broker uses a single well-known port number address.

5 15. The device of Claim 12 in which the service obtains a connection point and informs the service broker of the connection point address and the service broker then informs the client of the connection point address.

10 16. The device of Claim 15 in which the service broker informs the client of the connection point address and the client then uses that address in communicating directly with the server.

17. The device of Claim 15 in which the connection point address is a port number.

15 18. The device of Claim 15 in which, if a service is required more than once, the server providing the service will not be re-started, but instead the service broker uses cached address information.

20 19. The device of Claim 12 in which, when services register with the service broker, they register a version number to indicate the version of the service that they are providing.

25 20. The device of Claim 19 in which the client can request a specific version of a named service or it can omit the version, in which case the service broker will start the highest version available of the named service.

21. The device of Claim 12 in which the service broker can serve external clients that are PCs or other computers connected by a local link such as cable, Infra-Red or short distance radio (such as Bluetooth) or by a remote link such as a network data connection.

30 22. The device of Claim 12 in which the service broker provides authentication information such that only authenticated external clients can access services.

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